



Analysis Report

Product: Bentonite Clay
Batch Number: 4337103
Best Before End: September 2021

Results:

Parameter	Test specification	Result
Identification		
1. Identity A	a gelatinous white precipitate is formed	conforms
2. Identity B	the apparent volume of the sediment is not less than 22 ml after 2 hours	conforms (33 ml)
3. Identity C	gives the reaction of silicates	conforms
Purity		
4. Alkalinity	decolourisation of bluish solution within 5	conforms
5. Coarse particles	max. 0.5 %	<0.5 %
6. Heavy metals	max. 50 ppm	<50 ppm
7. Loss on drying	max. 15 %	9.5 %
8. Microbial contamination	TAMC: 10 ⁷ cfu/g; max. acceptable limit (Ph.Eur. 2.6.12): 2000	conforms (800 cfu/g)
Functionality-related characteristics		
9. Swelling power	see test identity B	conforms
10. Sedimentation volume with water	the volume of the clear supernatant liquid conforms is not greater than 2 ml after 24 hours	
Escherichia coli		not detectable /g

The sample conforms to Ph. Eur. 8.8, monograph Bentonit (8.0/0467)
According to the client, the monograph Bentonite in British Pharmacopeia 2017 conforms to the Ph.Eur. 8.8 monograph with regard to content. Therefore, the sample also conforms to BP 2017.



Allergen Statement

Bentonite Clay

Dear Sir/Madam,

I can confirm, following discussions with the supplier, that the below Allergen information is correct:

ALLERGENS	Product Free From?	Listed Item on Site at manufacturer	Where applicable, is there risk of cross-contamination?
Free from Peanuts and Peanut Derivatives (including possible cross contamination)	YES	NO	NO
Free from other Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i>	YES	NO	NO
Free from Sesame Seeds and Sesame Seed Derivatives	YES	NO	NO
Free from other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	YES	NO	NO
Free from Milk and Milk Derivatives (including lactose)	YES	NO	NO
Free from Egg and Egg Derivatives	YES	NO	NO
Free from Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten (<i>wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass</i>)	YES	NO	NO
Free from Soya and Soya Derivatives	YES	NO	NO
Free from Lupin and Lupin Derivatives	YES	NO	NO
Free from Mustard and Mustard Derivatives	YES	NO	NO
Free from Celery or Celery Derivatives (including Celeriac)	YES	NO	NO
Free from Fish and Fish Derivatives	YES	NO	NO
Free from Molluscs and their Derivatives	YES	NO	NO
Free from Crustaceans and their Derivatives	YES	NO	NO
Free from Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	YES	NO	NO



Flow Chart and Country of Origin Statement

Bentonite Clay

Dear Sir/Madam,

I can confirm, following discussions with the supplier, that the product origin is **Germany**

Please find the below Flow Chart for your reference:

natural clay	interim storage in boxes	quality selected in boxes	sediment approx. 65 %
box charging	charging of the line	charging by using wheel loaders	
coiler	preliminary size reduction	size reduction of big clay lumps	
drying drum	drying	approx. 1,5 h/ approx. 110° C	
		magnetic separator	
crusher	size reduction	roll crusher approx. < 10 mm	humidity approx. 12 %
silo	interim storage	stocks	
ball mill	grinding	grain band fractionation by the use of a classifier	TSR 45 µm max. 0,3 %
silo	interim storage	stocks	
		screen separator	
packaging/loading	packing	in bulk truck/bag/big bag	ecc. to specification
		magnetic separator	
		screen separator	
customer	consumer	application as a product	



GMO and Vegan Statement

Bentonite Clay

Dear Sir/Madam,

We can confirm, following discussions with the supplier, that the product origin is Vegan Suitable and GMO-

Free, as provided by our supplier. Hoping this meets with your requirements.

Material Safety Data Sheet

1. Substance & Company Identification

Product name:	Bentonite Clay	Company:	MADAR Corporation Limited 19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PE Tel: + 44 1425 655555 Email: sales@madarcorporation.co.uk
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2. Composition

Chemical Name Chemical Family Formulae	Bentonite Clay Montmorillonite Aluminosilicate of sodium, calcium and magnesium.	Hazardous components Concentration Quartz as dust <7.1µ CAS Number EINECS Number R-Phrases number	Quartz <5% total quartz. <0.5% 14808-60-7 238-878-4 Xn R48/20
CAS Number EINECS Number R-Phrases number	1302-78-9 215-288-5 Xn R48/20		

3. Hazards Identification

Possible Short term effects:

Skin Contact	May cause dryness.
Eye Contact	Irritation and soreness due to dust particles.
Inhalation	Irritation of nose and throat. Avoid exceeding WEL limit - see section 8.
Ingestion	Mild gastric irritation.
Labelling Classification	Xn – Harmful
Risk and Safety Phrases	R48/20, S22, S51
Precautions	Use in well ventilated areas, and do not breathe dust for prolonged periods – see Workplace Exposure Limits under section 8. Take care if wet as becomes slippery.

4. First Aid Measures

Skin Contact	Rinse thoroughly with cold water and seek medical attention if symptoms persist.
Eye Contact	Rinse thoroughly with cold water and seek medical attention if symptoms persist.
Inhalation	Remove person to fresh air, and if symptoms persist seek medical attention.
Ingestion	Drink several glasses of water or milk. If large quantities are ingested seek medical attention.

5. Fire Fighting Measures

Non-combustible	When extinguishing fires bear in mind product becomes slippery when wet.
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6. Accidental Release Measures

Personal precautions	Do not breathe dust for prolonged periods - see section 8. Becomes very slippery when wet.
Environmental risk	Non-toxic.
Cleaning up	Sweep -avoid dry sweeping as raises irritant dust, but do not wash with water as becomes very slippery when wet – mixing with damp sawdust is recommended or preferably vacuum up and dispose of as non-toxic waste.

7. Handling and Storage

Handling	Avoid the creation of dust and ensure adequate ventilation at point of use. See section 8.
Storage	Store in clean dry environment.

8. Exposure Control / Personal Protection

Hand protection	Use barrier creams and rubber gloves as required.
Skin protection	Normal work wear.
Eye protection	Wear safety glasses.

Respiratory protection	Use dust masks. Ensure adequate ventilation and dust control measures to maintain dust levels below WEL* limit.		
*Workplace Exposure Limits (WEL) according to COSHH E40/ 2005 amended Oct 2007: Dry bentonite is classed as a nuisance dust with an 8 hour TWA for amorphous dust inhalation of 6 mg/m ³ and 2.4 mg/m ³ for respirable dust (Respirable dust is that portion with a particle size <7.1µm.). Crystalline Silica present in small quantities in this product has a WEL of 0.1mg/m ³ for an 8 hour TWA period.			
9. Physical and Chemical Properties			
Appearance	Pale white, grey, yellow, or brown powder	Vapour pressure	N/A
Odour	Odourless	Flash Point	N/A
PH - 2% suspension	7 - 9.5		
S.G	2.5	Melting Point	N/A
Solubility	Forms suspension in water.		
Flammability	Non flammable	Boiling Point	N/A
Explosive properties	None		
10. Stability and Reactivity			
Conditions to avoid	Avoid generation of dust. Do not wet any spills.		
Materials to avoid	Oxidising agents		
Hazardous Decomposition products.	None		
11. Toxicology Information			
Ingestion	Orally non toxic. LD50 > 5000mg/kg Rat oral.		
Eye contact	Causes irritation due to physical abrasion by dust particles.		
Skin contact	Non toxic may cause skin dryness and chapping.		
Inhalation	Long term exposure to Bentonite dust in excess of the WEL limit may result in fibrosis of the lung tissue. The presence of respirable crystalline silica may lead to silicosis if the WEL is persistently exceeded over a long time.		
12. Ecological information			
This is a natural mineral with no known ecological problems associated with bentonite.			
13. Disposal Considerations			
Dispose of in accordance with local and national regulations using an approved disposal contractor.			
14. Transport Information			
There are no specific transport precautions required, as product is classified as not dangerous, but product should be kept dry as becomes slippery when wet and avoid dust creation.			
15. Regulatory Information			
European Inventory of New and Existing Chemical Substances – All the components of this product are listed on the EINECS inventory.			
EC Substance Classification – Directive 67/548/EEC Labelling Classification, Xn Risk and Safety Phrases R48/20 , S22			
COSHH regulations E40/2005 updated October 2007 apply in the UK.			
16. Other information			
EU Classes and Risk Phrases for Reference (See sections 2 and 3) Xn Harmful - substances which may cause health hazards less than toxic. It could refer to other types of risks e.g. to allergic reactions. R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation. S22 Do not breathe dust.			
Typical uses of this product are Civil engineering, Oil well drilling, Ceramics, Foundry applications, Land Fill barriers, Bore-hole sealing.			



SPECIFICATION

Bentonite Clay

	Current value 10/2014	Specification	MAXI	
Arsenic	13,2	25		ppm
Cadmium	0,64	2		ppm
Mercury	0,4	1		ppm
Lead	9	30		ppm
Fluorine	80	4000		ppm
Dioxines PCDD/F	0,09	0,5		ng WHO-PCDD/F-TEQ/ kg
ioxines (PCDD/F + PCB type dioxine)	0,12	0,75		ng WHO-PCDD/F-PCB-TEQ/ kg
Sum of PCB	3	10		µg/kg



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